Alabama’s Emerging Hepatitis C Epidemic and Vulnerability to an Outbreak of HIV Infection Among Persons Who Inject Drugs

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The Opioid & Blood Born Virus (BBV) Syndemic

**Syndemic** - A set of linked health problems involving two or more afflictions, interacting synergistically, and contributing to excess burden of disease in a population

Needle scarcity & unsterile needle re-use (sharing) increases the risk for acquiring BBVs, including HIV and HCV infection
Hepatitis C Infection

Blood-born virus

Highly prevalent
- >5 million in US estimated

High morbidity & mortality
- 60-70% will develop chronic liver disease
- 20% will develop liver cirrhosis
- Up to 5% will die of liver failure or liver cancer
- Leading cause of liver transplant

Curative
- 12 week course of all oral medications

Evolving Epidemiology of HCV Infection in the US

- Persons born between 1945-1965 account for 75% of infections

- Rising incidence among young (age <30) white IDUs


UAB Emergency Department
Universal Hepatitis C Testing
October 15, 2015 to February 15, 2016 (*Unpublished data*)

<table>
<thead>
<tr>
<th>Born 1945-1965</th>
<th>No. Tested, n</th>
<th>HCV-Ab +, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>2,204</td>
<td>231 (10.5)</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1,104</td>
<td>163 (14.8)</td>
</tr>
<tr>
<td>Female</td>
<td>1,100</td>
<td>68 (6.2)</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>1,058</td>
<td>100 (9.5)</td>
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<tr>
<td>Black</td>
<td>1,092</td>
<td>128 (11.8)</td>
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<tr>
<td>Other</td>
<td>39</td>
<td>3 (7.7)</td>
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<tr>
<td>Missing</td>
<td>15</td>
<td>0 (0.0)</td>
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<tr>
<td><strong>Insurance Type</strong></td>
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<tr>
<td>Commercial</td>
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<tr>
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<tr>
<td>Medicaid/Public</td>
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<td>70 (16.9)</td>
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<tr>
<td>Uninsured</td>
<td>275</td>
<td>47 (17.1)</td>
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<tr>
<td>Other/Missing</td>
<td>104</td>
<td>7 (6.7)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Born After 1965</th>
<th>No. Tested, n</th>
<th>HCV-Ab +, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
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<td>227 (6.0)</td>
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<tr>
<td><strong>Sex</strong></td>
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<td></td>
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<tr>
<td>Male</td>
<td>1,619</td>
<td>138 (8.5)</td>
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<tr>
<td>Female</td>
<td>2,149</td>
<td>89 (4.1)</td>
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<tr>
<td><strong>Race</strong></td>
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<tr>
<td>White</td>
<td>1,554</td>
<td>181 (11.7)</td>
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<tr>
<td>Black</td>
<td>2,063</td>
<td>41 (2.0)</td>
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<tr>
<td>Other</td>
<td>96</td>
<td>1 (1.0)</td>
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<tr>
<td>Missing</td>
<td>55</td>
<td>4 (7.2)</td>
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<tr>
<td><strong>Insurance Type</strong></td>
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<td></td>
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<tr>
<td>Commercial</td>
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<td>23 (2.2)</td>
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<td>Medicare</td>
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<td>23 (6.4)</td>
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<tr>
<td>Medicaid/Public</td>
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<tr>
<td>Uninsured</td>
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<td>119 (9.5)</td>
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<tr>
<td>Other/Missing</td>
<td>155</td>
<td>14 (9.0)</td>
</tr>
</tbody>
</table>

Total tested: 5,972
HCV-Ab+: 458 (7.7%)
Largest HIV outbreak in Indiana history: A toxic mix of drug addiction, poverty, hopelessness

Giles Bruce giles.brucenwi.com, (219) 853-2584   Apr 18, 2015
Community Outbreak of HIV Infection Linked to Injection Drug Use of Oxymorphone — Indiana, 2015

Caitlin Conrad1, Heather M. Bradley2, Dita Broz2, Swamy Buddha1, Erika L. Chapman1, Romeo R. Galang2,3, Daniel Hillman1, John Hon1, Karen W. Hoover2, Monita R. Patel2,3, Andrea Perez1, Philip J. Peters2, Pam Pontones1, Jeremy C. Roseberry1, Michelle Sandoval2,3, Jessica Shields4, Jennifer Walthall1, Dorothy Waterhouse4, Paul J. Weidle2, Hsiu Wu2,3, Joan M. Duwve1,5 (Author affiliations at end of text)

MMWR Morbidity and mortality weekly report. 2015;64(16):443-444.
County-level Vulnerability to an Outbreak of HIV and HCV Infection among PWID (Top 5%)

US County-level vulnerability ranking
- Scott Co, IN 32nd
- Walker Co, AL 37th

Walker County
- highest mortality and annual mortality percent change in Alabama 2 times overall Alabama rates
- greatest number of EMS naloxone administration events per capita with 25.5 events per 10,000 residents compared to 6.8 events per 10,000 residents statewide.

Vulnerable Alabama counties for an HIV and HCV outbreak among PWID*

EMS naloxone administration events per 10,000 county residents in 2014.

Vulnerable Alabama counties for an HIV and HCV outbreak among PWID*

High-risk HCV prevalence zip codes for persons born after 1965 identified through the UAB Emergency Department universal HCV testing

Curbing the Opioid and BBV Syndemic
Audience Question

Some people feel that one way to engage persons who inject drugs and reduce the spread of communicable diseases is to offer needle exchange programs. Needle exchange programs involve agencies providing clean needles to drug users and others who inject themselves in exchange for used ones, in hopes of minimizing the spread of contagious diseases like HIV/AIDS and Hepatitis C.

In general, would you say you...

1 - disapprove strongly
2 - disapprove
3 - approve
4 - approve strongly
5 - or have no opinion at all about needle exchange programs
Harm Reduction – set of practical strategies and ideas aimed at reducing the negative consequences of drug use

Harm reduction interventions:
- Home naloxone distribution
- Opioid replacement therapy
- Syringe service programs
- Blood born virus testing

Immediate goals achievable through harm reduction:
- Reduction in overdose deaths
- Reduction in the spread of blood born virus infections through testing, referral, and vaccines
- Education of users on safer practices
- Reduction in illicit use through opioid replacement therapy
Syringe Services Programs: More than Just Needle Exchange

What is an **SSP**? A community-based program that ideally provides comprehensive services

- Free sterile needles and syringes
- Safe disposal of needles and syringes
- Referral to mental health services
- Referral to substance use disorder treatment, including medication-assisted treatment
- HIV and hepatitis testing and linkage to treatment
- Overdose treatment and education
- Hepatitis A and B vaccination
- Other tools to prevent HIV and hepatitis, including counselling, condoms, and PrEP (a medicine to prevent HIV)

**SSPs DON’T increase illegal drug use or crime but DO reduce HIV risk.**

HIV diagnoses are down among PWID. More access to SSPs could help reduce HIV further.

SOURCE: Vital Signs, December 2018
Improved Addiction Recovery Access (Long-Term Goal)

Inpatient / Residential / Outpatient Addiction Recovery Care must be:

- **Affordable**
- **Accessible** (Local)
- **Accountable** for outcomes
Improved Addiction Recovery Access
(Long-Term Goal)

Criminal Justice Reform

• 50% of all prisoners meet criteria for drug abuse or dependence

• Alternatives to incarceration
  • treatment merged with judicial oversight in drug courts
  • prison- and jail-based treatments, including opioid replacement tx
  • reentry programs intended to help offenders transition from incarceration back into the community

• Improve medical outcomes & reduce recidivism = reduced costs

“Punishment alone is a futile and ineffective response to drug abuse, failing as a public safety intervention for offenders whose criminal behavior is directly related to drug use.”*

Current scope of the Alabama opioid epidemic has been measured in deaths and arrests.

Important knowledge gap:
- True size of the epidemic
- Locations affected
- Prevalence of HIV and HCV infection

This knowledge is essential to:
- Estimate the needs / costs and locations of any short or long-term intervention
- Serve as a baseline to measure the effectiveness of any intervention
Barriers to Alabama’s Harm Reduction & Recovery Efforts

Financial

*Who pays for this?*

- Costs should be shared among all facets of the US healthcare system and criminal justice system because we all stand to gain from such an investment

Political

*Can we align our laws with the evidence to reduce harm in Alabama?*

- The evidence for harm reduction is not controversial, but societal beliefs and politics is controversial
<table>
<thead>
<tr>
<th>Funding Source</th>
<th>Source Potential Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama General Fund</td>
<td>Vote winner</td>
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<tr>
<td>Public Health</td>
<td>Improved surveillance &amp; addiction outcomes</td>
</tr>
<tr>
<td>Criminal justice system</td>
<td>Reductions in crime and costs related to crime</td>
</tr>
<tr>
<td>Health Systems</td>
<td>Reduction in healthcare costs</td>
</tr>
<tr>
<td>Insurance providers</td>
<td>Reduction in healthcare costs</td>
</tr>
<tr>
<td>Industry</td>
<td>Sales (HCV tx, opioid replacement, naloxone)</td>
</tr>
<tr>
<td>NIH / AHRQ / PCORI</td>
<td>Scientific advancement / knowledge</td>
</tr>
</tbody>
</table>

Funding Alabama’s Harm Reduction & Recovery
Thatcher’s Needle Exchange Was Revolutionary

In 1986, Margaret Thatcher initiated a needle exchange programme to prevent the spread of HIV and protect society. In its day, the Needle Exchange Programme was branded debauchery and was seen to condone drug use.

Margaret Thatcher, loved or hated her, took charge and did what was right for the country, and took a brave step and stuck by her guns.

Regulation of drugs is the inevitable and logical conclusion to the ‘revolutionary’ programme.

We are now 24 years into the programme and the UK has the lowest levels of drug users in modern-day stance on health-related drug use. And it is believed that countries that do not have such programmes and refuse to do so, the US and Russia being the two most prominent, are the ones that have the highest HIV rates. Among drug users, the rate of HIV infection among drug users is one in 100 in the UK to 1 in 10 in Russia.

Regulating and controlling drugs in the UK is not revolutionary, it is a continuation of the same programme in its essence. We look to Portugal, Holland, Italy, and the Czech Republic; these countries have decriminalised drug use; HIV rates have plummeted, harm has been reduced considerably, and every area of society has benefited. Australia and children also see a noticeable change for the better.

Continue Thatcher’s legacy, her work is unfinished. Clean up the country and take drugs away from cartels and gangs. Regulate, decriminalise, and control drug use, anything uncontrollable under prohibition.

Thatcher, for better or for worse, was a leader, not afraid of media bias. We need leading; we cry out for leadership.
The Growing Necessity of Syringe Service Interventions in the US

More States and Cities Consider Needle-Exchange Programs to Reduce Spread of Infection

BY JOIN TOGETHER STAFF

PUBLIC HEALTH

Indiana’s HIV Outbreak Leads To Reversal On Needle Exchanges

June 2, 2015 - 4:15 PM ET

Needle exchanges spread in Kentucky as outbreak threat grows

Early results of W.Va. town’s needle exchange program show progress

BY CHRISTINE VESTAL, STATELINE June 6, 2016 at 11:22 AM EDT
Alabama Laws Regarding Syringes  
(AL Statute 13-A-12-260)

(a) Definition of "drug paraphernalia." As used in this section, the term "Drug paraphernalia" means all equipment, products, and materials of any kind which are used, intended for use, or designed for use, in planting, propagating, cultivating, growing, harvesting, manufacturing, compounding, converting, producing, processing, preparing, testing, analyzing, packaging, repackaging, storing, containing, concealing, injecting, ingesting, inhaling, or otherwise introducing into the human body a controlled substance in violation of the controlled substances laws of this state. It includes but is not limited to:

(11) Hypodermic syringes, needles and other objects used, intended for use, or designed for use in parenterally injecting controlled substances into the human body;

- No explicit authorization for syringe exchange by law
- No exceptions to the law that would allow for the distribution of syringes to prevent blood-borne diseases
“Your longevity and health are more determined by your zip code than they are by your genetic code”

Tom Frieden, MD, MPH
CDC Director

Annual Mortality Rate of Change for Mental Health & Substance Use Disorders (2000-2014), Both Sexes, Age-Standardized
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